SPECIAL OPERATIONS FORCES ACQUISITION, TECHNOLOGY, AND LOGISTICS
PROGRAM EXECUTIVE OFFICE FOR SPECIAL RECONNAISSANCE, SURVEILLANCE AND EXPLOITATION (SOF AT&L-SRSE)
APPENDIX G-2 Spring 2017
TO
BROAD AGENCY ANNOUNCEMENT
USSOCOM-BAAST-2015

1.0 Introduction: SRSE is requesting special attention be given to a subset of its technical areas within the various product lines for the period specified below. This condensed list is meant to focus industry and aid the core Rapid Capability Insertion (RCI) business process. SRSE and RCI remain interested in proposed capabilities that can be integrated within current architecture(s) and platforms.

2.1. General Information:

2.2. Agency: USSOCOM

2.3. Program Office: SOF AT&L-SRSE

2.4. Appendix Title: Appendix G-2 Spring 2017, Rapid Capability Insertion (RCI) Special Items of Interest

2.5. BAA Number: USSOCOM-BAAST-2015

2.6. Closing Date: This BAA appendix will remain open through **May 26, 2017**, unless superseded, amended, or cancelled. White papers may be submitted any time during this period subject to the submission process described in this BAA appendix. For consideration to be briefed at the June 2017 RCI Program Management Review (PMR), submissions must be received prior to April 6, 2017.

2.7. Points of Contact (POC):

Contracting POC:
Primary: 1st Lt Joseph Banaszek, Phone 813-826-0398, Email joseph.banaszek@socom.mil

Technical POC:
Primary: Mr. Dan Granados, Phone 813-826-7421, Email daniel.granados@socom.mil

2.8. Technology Areas of Interest:

The following sections provide a brief description of each area and a list of technologies of interest. RCI is interested in projects starting at a minimum of Technology Readiness Level (TRL) 3 (as defined by the Department of Defense (DOD) Acquisition Guidebook (September 16, 2013)); at project completion deliverables should be TRL 7.

2.8.1 Biometrics/Forensics and Sensitive Site Exploitation: This product line covers technologies used to collect, analyze, and distribute various physical parameters that can be used to identify personnel and activities inside a sensitive site to exploit personnel,

documents, electronic data, and material obtained at the site. There is particular interest in technologies with a small form factor that rapidly identify personnel, reduce false alarm rates and/or offer novel approaches at short to long distances in all environmental conditions. This product line also covers the collection and processing of both physical and electronic information obtained from target locations. The technologies should provide improvements in software applications, sensitivity, identification, processing speed, and data correlation. Technologies of interest:

- **2.8.1.1** Reduce size, weight, power (SWaP) of existing tools, and expand mobile wireless capabilities
- **2.8.1.2** Deployable and compliant Rapid DNA profiling capability (<2 hrs.)
- **2.8.1.3** Multi-modal biometric enrollment and matching device that includes a combination of iris scanner, facial recognition, DNA, and fingerprint capture and processing
- **2.8.1.4** Biometric/forensic tools (e.g. dustless fingerprint collection, voice print analysis, iris scan) at extended target distance
- **2.8.1.5** Document exploitation, to include rapid scan and translation of foreign language, for hard copy documents utilizing a small form factor device such as a laptop, tablet, smart phone
- **2.8.1.6** Electronic media exploitation
  - **2.8.1.6.1** Computers
  - **2.8.1.6.2** Cell phones/Sim cards
- **2.8.1.7** Trace evidence collection, identification and processing
  - **2.8.1.7.1** Explosive/Chemical
  - **2.8.1.7.2** Biological
- **2.8.1.8** Detection of hidden rooms/chambers

2.8.2 Data Exfil: Technologies that provide additional data transfer capabilities, reduce SWaP, increase flexibility in aerial, ground, underground, and maritime/riparian communication environments. Technology areas of interest are:

- **2.8.2.1** Capabilities that integrate with existing SOF platforms
- **2.8.2.2** Image and video compression techniques
- **2.8.2.3** Multiband, micro-sized devices capable of transmitting and receiving RF over distances greater than currently achieved
- **2.8.2.4** New technologies that provide long distance data transfers in miniature packages and are LPI/LPD/LPE and multipath resilient
- **2.8.2.5** Data Exfil devices designed to perform in restricted propagation environments

2.8.3 Signal Detection and Exploitation: Technologies that concentrate on RF communications intercept and location identification. Technologies of interest should provide improved performance, flexibility, reduce SWaP, and lower cost. Platforms and operational environments can be on land, air, sea, manned or unmanned, manpack based active and/or passive systems. Technologies of interest are:

2.8.3.1 Modular, scalable components utilizing open architecture standards for both hardware and software. Components of a system that can be interchanged by operational planners for variance in target frequencies and power requirements. Components for a system that can be easily upgraded when technology becomes available

2.8.3.2 Digital HF,VHF, and UHF signal

2.8.3.3 Surveillance Harvesting

2.8.3.4 Wi-Fi, WiMAX, Bluetooth, RFID, Near Field Communications (NFC)

2.8.3.5 Capabilities that integrate with existing SOF platforms

2.8.3.6 RF location and Direction Finding signal processing algorithms and hardware

2.8.3.7 Low-power and low noise amplifiers with ultra-high linearity and higher dynamic range front ends for use in command, control, and communications systems without compromising system sensitivity (noise figure)

2.8.3.8 Enhancements in the ability to power sensors and communications either through better power sources or improved efficiencies

2.8.3.9 Technologies to use SIGINT systems to support TTL and other unattended sensor operations (platform agnostic)

2.8.3.10 Detection of electronic devices in room, vehicle, etc. with handheld device

2.8.3.11 Improved cellular exploitation middleware, cellular pin code bypass/cracking

2.8.4 Force Protection / Counter-Measure: These technologies focus on reducing signatures, form factors, and non-friendly identification of existing electronic capabilities/signatures. Technologies of interest are:

2.8.4.1 Reduce SWaP of existing tools, provide non-standard equipment packaging

2.8.4.2 Emission reduction or masking

2.8.4.3 Threat warnings

2.8.4.4 Detect and counter small unmanned aircraft systems (UAS)

2.8.5 Sensors: This product line covers various persistent surveillance systems also referred to as unattended ground sensor (UGS) systems, tactical surveillance systems (TVS), and force protection systems. Technologies that provide additional capabilities, reduce SWaP, increase flexibility in aerial, ground, underground, and maritime/riparian environments of the following:

2.8.5.1 Capabilities that integrate with existing SOF platforms

2.8.5.2 On camera video motion detection

2.8.5.3 Man-portable discrete intrusion detection system

2.8.5.4 Systems that will accommodate multiple wavelengths in a small COTS application (TVS focus)

2.8.5.5 Swappable/modular capabilities (TVS focus)

2.8.5.6 Image and video compression techniques

2.8.5.7 Improved sensor algorithms to reduce false alarms and missed detections

2.8.5.8 Sensor algorithms for fusing data from multiple sensors to reduce false alarms

2.8.5.9 Sensor algorithms for location, classification, and identification of targets

2.8.5.10 Enhancements in the ability to power sensors and communications either through better power sources or improved efficiencies

2.8.5.11 High Altitude Long Endurance (HALE) sensor

2.8.5.12 Detection via handheld (cell phone size) electronic scan of small devices, such as sim cards, SD cards, or similar items on a person
2.8.5.13 Sense-through-the-wall technologies

2.8.6 Support and Ancillary Equipment: This area concentrates on items critical to mission success but is often not part of the initial design. Technologies of interest should provide improved performance, SWaP and ease of use. Technologies of interest are:

2.8.6.1 Advanced antenna designs with equal to or greater performance than current antennas:
2.8.6.1.1 Body worn
2.8.6.1.2 Conformal
2.8.6.1.3 Physically small
2.8.6.1.4 Tunable
2.8.6.1.5 Multi-band
2.8.6.1.6 Broadband
2.8.6.1.7 High gain/Efficient
2.8.6.1.8 Steerable, including maritime self-adjusting/automated potentially gimbal mounted antenna
2.8.6.1.9 Low-Visibility/Concealable

2.8.7 Tagging, Tracking, and Locating (TTL): This product line covers TTL technologies that can be used on persons and objects. Technologies of interest would provide reductions in SWaP, improved accuracy, or new capabilities to the following:

2.8.7.1 Capabilities that integrate with existing SOF platforms
2.8.7.2 Non-GPS Trackers
2.8.7.3 Maritime TTL capability at/below the waterline that allow over-the-horizon programming and data exfiltration
2.8.7.4 Optical Taggants
2.8.7.5 Chemical Taggants
2.8.7.6 Novel non-traditional TTL capabilities
2.8.7.7 Multi-waveform data exfiltration
2.8.7.8 TTL attachment methodology; self-release, non-metallic, timed release, etc.
2.8.7.9 Micro-sized, low visibility, emergency Personnel Locator Beacons (PLB)
2.8.7.10 Handheld TTL or PLB Geolocation

3.1 Submission Instructions for Appendix G-2 Spring 2017 to Broad Agency Announcement USSOCOM-BAAST-2015

3.2 Technology Development Cost and Schedule: Offerors are advised to consider a limit of not more than $1.5 million total cost of development and not more than 18 months to complete all efforts for each submission under Appendix G-2 Spring 2017. Offerors may exceed this amount, but they may or may not be considered for award due to cost and schedule constraints and/or other statutory or regulatory requirements.

3.3 Quad Chart and White Paper Submission and Review Periods: The Appendix G-2 Spring 2017 will open on **February 27, 2017** and close on **May 26, 2017 at 11:59 p.m. EST**. USSOCOM SOF AT&L-SR intends to conduct scientific and peer reviews during the submission period and up to 30 days after closing this appendix. USSOCOM will notify Offerors whether or not their quad chart/white paper was selected for submission of a proposal. This process usually takes 6-8 weeks after submission.

3.3.1 Instructions for the Preparation and Submission of Quad Chart and White Paper

3.3.1.1 A Quad Chart and White Paper (QC/WP) is intended to gain a preliminary assessment of the Government's interest prior to incurring the additional expense associated with a full proposal submission. Those QC/WPs found to be consistent with the intent of this BAA may be invited to submit a full technical and cost proposal. This however does not obligate the Government to award a contract. Based on the initial assessment, Offerors may be requested to submit a full proposal or may be informed that the prospective science or technology is not in alignment with current program interests. This is intended to reduce unnecessary handling of proposals and proposal preparation costs. All responsible organizations may submit a quad chart and white paper which shall be considered.

3.3.1.2 Proposals. Additional information regarding proposal submission requirements will be provided after the decision is made to pursue the QC/WP. The following general guidance is provided for reference: Proposals submitted under this BAA Appendix G-2 Spring 2017 are expected to be unclassified; all proposal submissions will be protected from unauthorized disclosure in accordance with applicable federal law and DOD/USSOCOM regulations; Offerors shall appropriately mark each page of their submission that contains proprietary information or other restrictions. However, the Government prefers that information received be non-proprietary. If Offerors need to submit any classified information they should contact the Contracting Officer listed in Section 2.6.

3.3.1.3 Submission – QC and WP shall be submitted at the same time (same upload submission); otherwise the Government will not review. Electronic submission via web page https://www.socom.mil/SOF-ATL/Pages/srse-rci-submission.aspx NOTE: Do not combine the quad chart and white paper into a single file. Submit each as a separate file. DO NOT password protect the files.

3.3.1.4 Submission Content and Formats. Note that requests for alternative proposal formats may be appropriate and should be coordinated with the SOF AT&L-KI Contracting Officer.

Quad Chart (PDF Format)

- Number of pages – 1

- Font – Times New Roman, 12 Point
- Page orientation – landscape
- Paper size – 8.5 x 11 inch
- Upper left quad – Pictorial data or representation
- Upper right quad – Description of effort and perceived benefits
- Lower left quad – Summary cost data; labor, materials, subcontracting, travel, profit
- Lower right quad – Project schedule, milestones and deliverables

White Papers (PDF Format)

- Number of pages – 5 pages excluding cover page. Pages shall be numbered.
- Cover Page – Labeled "WHITE PAPER" and shall include 1) BAA number and Appendix, 2) proposal title, 3) company information to include address, phone, fax, CAGE Code, DUNS Number, and technical & contracts contact information with email address.
- Technical Concept/Narrative – a description of the effort and applicability to the identified program area mission and the objectives/benefits to be derived as a result of the effort. This shall include;
    1. Brief (4 – 5 sentence) executive overview of delivered capability,
    2. Technical approach (why this approach is superior to alternatives and/or current practice),
    3. Effort's perceived benefit (How will this effort improve or replace the state- of-the-art?),
    4. Technical risk areas (to include mitigation plan),
    5. Performance period,
    6. Pricing ROM,
    7. Expected deliverables and
    8. Any other technical data/information to be conveyed for consideration to include the final deliverable(s) or end item(s).
- Paper Size- 8.5 x 11 inch paper
- Margins – 1"
- Spacing – Single or double
- Font – Times New Roman, 12 Point
- Microsoft Windows or .PDF format

3.2.2 Proposals. Additional information regarding Proposal requirements will be provided if the Government decides to pursue the QC/WP submission. NOTE: Offerors are notified that only full proposals (not the QC/WP) will be subjected to a complete proposal technical evaluation.

3.3 Criteria, Relative Importance, and Method for Selecting Proposals for Award:

The Government will review each QC/WP and select the Offerors that have the greatest potential to meet the needs of USSOCOM technology requirements based on the areas stated in USSOCOM-BAAST-2015 Appendix G-2 Spring 2017. Initially, a determination will be made if each Offeror is technically qualified and has a comprehensive understanding to undertake the development of the technology based on the information stated in the QC/WP. The Government

will determine the most technically competent and capable of the qualified Offerors using the criteria below.

- Criteria (Factors) for Selecting QC/WP for Full Proposal Submission:
    - Importance to agency programs,
    - Technical merit/applicability, and
    - Funds availability.
- Relative Importance: All Factors are of equal importance.

Method of Evaluation: Peer or scientific review.

4.0 Industry Day: PM RCI will host an Industry Day, to answer questions regarding this BAA Appendix G-2 Spring 2017. Discussions will be conducted at the SECRET classification level. The industry day will be conducted on March 15, 2017 in the Washington, DC metro area. Industry Day is an optional vendor event; attendance is not a requisite for submitting against this BAA appendix. Interested attendees must register at http://www.cvent.com/d/3vqgxp by March 8, 2017.